THE MINERAL INDUSTRY OF CONGO (KINSHASA)

By George J. Coakley

Introduction

The Democratic Republic of the Congo [Congo (Kinshasa)] is located in the heart of equatorial central Africa and has an area of 2,267,600 square kilometers (km^2), which is about one-fourth that of the United States. The area supported a population of about 58 million in 2003. The gross domestic product (GDP) was estimated to be $35.62 billion and the GDP per capita to be $590 based on 2003 purchasing power parity data (U.S. Central Intelligence Agency, 2004§[1]). Inflation declined to 14% compared with 16% in 2002. Historically, the mining industry accounted for 25% of the GDP and about three-quarters of total export revenues. The International Monetary Fund (IMF), however, reported a drop in the mining sector's estimated share of the GDP in 2000 (the latest year for which data were available) to 6% and an overall decline in the sector of 21% between 1996 and 2000 (International Monetary Fund, 2004§). With economic and management assistance from the IMF and the World Bank since 2001, the country had been trying to turn around the long-stagnant economy by stabilizing the macroeconomic situation and reestablishing a tax revenue flow to the central Government, particularly from the diamond, copper-cobalt, and petroleum industries.

Politically, the peace accord signed in Sun City, South Africa, in April 2002 set the stage for withdrawal of foreign troops from Congo (Kinshasa) and the beginning of efforts to draw up a new constitution and to establish a new Government of national unity. In June 2003, a transitional coalition government made up of Congo (Kinshasa) Government leaders and opposition party leaders from the Mouvement de la Libération du Congo (MLC) (Movement for the Liberation of Congo), the Rassemblement Congolais pour la Démocratie (RCD–Goma) (Rally for Congolese Democracy), and RCD-Mouvement de Libération (RCD-ML) (RCD–Liberation Movement) was formed with a 2-year mandate to arrange for democratic elections. Despite ongoing instability and occasional civil unrest in areas controlled chiefly by opposition factions of the RCD–Goma and the MLC in the northeastern portion of the country, the rest of the country slowly returned to some level of normalcy.

For 2003, the IMF reported a negative $123 million merchandise trade balance. Exports were valued at $1.28 billion, of which diamonds accounted for $813 million in 2003 compared with exports of $1.08 billion in 2002, of which diamonds accounted for $653 million (International Monetary Fund, 2004§). The higher diamond revenue can be attributed, in part, to Government efforts to reduce smuggling and to comply with the certificate of origin provisions of the international Kimberley Process agreement (Kimberley Process Secretariat, 2003§). Merchandise imports, of which fuel and mining-related equipment were a major component, were valued at $1.40 billion in 2003 compared with $1.09 billion in 2002.

Congo (Kinshasa) is richly endowed with such mineral resources as coal, cobalt, columbium (niobium)-tantalum (locally referred to as "coltan"), copper, diamond, germanium, gold, manganese, petroleum, tin, uranium, and zinc. Despite the collapse of much of the formal mining infrastructure, it was still an important world source of industrial diamond and cobalt (table 1).

Structure of the Mineral Industry

The Government maintained at least part ownership and generally majority ownership of nearly all the productive and service sectors of the economy (see table 2). La Générale des Carrières et des Mines (Gécamines) produced essentially all of the country's coal, cobalt, copper, and zinc. It also operated subsidiaries that produced cement, coal, and other materials required for the company's primary mineral interests. La Société Minière de Bakwanga (MIBA) produced about 25% of industrial diamond output from Government-controlled lands in the Kasai Occidental and Kasai Oriental Provinces; the remainder came from a large number of artisanal operators, chiefly within the same regions. MIBA was owned by the Government (80%) and by the Sibeka Group (20%), which was owned by N.V. Umicore SA (79%) and De Beers Centenary AG (20%). Société Minière et Industrielle du Kivu (Sominki), which was the largest formal columbium (niobium)-tantalum, gold, and tin producer, and Office des Mines d'Or de Kilo-Moto (Okimo), which was the major gold producer, were the other principal parastatal mining companies. The majority of Okimo and Sominki holdings were in rebel-held areas in eastern Congo (Kinshasa) and not officially in operation. In April 2002, Banro Resources Corp. of Canada settled a 3-year-long dispute with the Government over rights to the old Sominki holdings. Under the agreement, Banro retained a 100% interest in the Kamituga, Lugushwa, Namoya, and Twanziga gold deposits and revived its 25-year mining convention, which was to be rewritten to conform to the new Mining Code. The Government was to retain 100% rights to the tin assets formerly held by Sominki (Banro Resources Corp., 2003§). Barrick Resources Ltd. of Canada and AngloGold Ashanti Limited, which was formed by the merger of AngloGold Ltd. of South Africa and Ashanti Goldfields Co. Ltd. of Ghana in April 2004, controlled much of the gold exploration rights in and around the Kilo Moto gold district in Orientale Province.

Under provisions of the 2002 Mining Code and subsequent Decree 068/2003 of April 3, 2003, a new Cadastre Miniere (CAMI) was established. Under the supervision of the Mines and Finance ministers, CAMI would be responsible for the granting and renewal of mining and quarrying rights, the transformation and leasing of mining rights, securities on mining assets, determining the financial capacity of applicants, and maintaining a national registry of registry books and survey maps available to the public. CAMI became

[1]References that include a section mark (§) are found in the Internet References Cited section.

operational during 2003 with assistance from the World Bank and subsequently converted 270 mining rights and 10 quarrying rights from the old system to make them valid under the new Mining Code. In addition during the year, CAMI issued 1,580 exploration licenses that covered more than 245,000 km^2, and 81 force majeure declarations. The largest exploration concession areas were held by Anglo American plc (Anmercoza subsidiary) for copper and cobalt, Banro Resources Corp. for gold and silver, BHP Billiton Plc for copper-cobalt and diamond, Bugeco SA for diamond, the De Beers Group for diamond, First Quantum Minerals Ltd. for copper and gold, and SouthernEra Resoirces Inc. for diamond (Mbaka Kawaya Swana, 2004).

Commodity Review

Copper and Cobalt.—During 2002 and 2003, efforts to reestablish a functioning central Government, passage of a new mining law, and relative stability in the main mining areas of Katanga Province saw a return of foreign investors to Katanga to begin re-evaluating their existing joint-venture agreements with Gécamines. Highlights for this period included the startup of Anvil Mining NL of Australia's $5.7 million high-grade Dikulushi copper-silver open pit mine and heavy-media separation plant in September 2002 and the second full year of operation in 2003 of Compagnie Minera De Sakania SPRL's (Comisa) Lonshi open pit copper mine. Comisa was 100% owned by First Quantum Minerals Ltd. of Canada.

During 2003, Anvil Mining mined 294,041 metric tons (t) of ore at Dikulushi at a grade of 7.4% copper and 195 grams per metric ton (g/t) silver. The mine is located west of Pweto and Lac Moero in southeastern Congo (Kinshasa) near the Zambian border. Concentrates were trucked to the Ongopolo smelter in Namibia and yielded 13,349 t of copper and 33,309 kilograms (kg) of silver. Anvil expected to commission Stage II of its operation by the end of the second quarter 2004, and to increase production to 20,000 metric tons per year (t/yr) of copper and 56,000 kilograms per year (kg/yr) of silver contained in concentrates. In 2004, Anvil Mining NL planned to create a Canadian holding company, Anvil Mining Limited, and to list on the Toronto Stock exchange to help it access North American mining investment capital (Anvil Mining Limited, 2004§).

The Lonshi Mine was located in the so-called pedicle extension of southeastern Congo (Kinshasa). During 2003, Comisa mined 711,299 t of high-grade ore at 4.8% [acid soluble copper (ASCu)] compared with 951,100 t of high-grade ore at 5.42% ASCu in 2002. Ore was trucked 35 kilometers across the Zambian border to First Quantum's Bwana Mkubwa solvent extraction-electrowinning (SX-EW) plant. The Bwana Mkubwa plant produced 29,513 t of copper cathode in 2003 compared with 11,878 t in 2002; production was expected to increase to 35,000 t/yr of copper in 2004. First Quantum also announced the discovery of a second high-grade copper deposit at Lufua during 2003 and was expected to announce a resource estimate by mid-2004 (First Quantum Minerals Ltd., 2004§).

Congo Mineral Developments Ltd. (CMD), which was a 100% owned subsidiary of American Mineral Fields Inc. (AMF), finalized its contract of association with Gécamines and the DRC Government to operate the Kolwezi copper-cobalt tailings project. Under the terms of the agreement, a new operating company, Kingamyambo Musonoi Tailings SARL (KMT), will be formed; CMD will own 82.5% of KMT; Gécamines, 12.5%; and the Government, 5%. KMT will make two payments to Gécamines to acquire the rights to the Kolwezi tailings resource. The first payment of $5 million will be made at the time of the transfer of the mining rights and a second payment of $10 million will follow completion of the bankable feasibility study. Gécamines will also be entitled to additional profit participation in case of an elevated copper price. The Kolwezi project consisted of two tailings dams that contained 112.8 million metric tons (Mt) of oxide tailings at a grade 1.49% copper and 0.32% cobalt. With an initial investment of $330 million, the SX-EW plant will treat approximately 3 million metric tons per year (Mt/yr) of tailings, which will have a projected annual output of 42,000 t/yr of copper and 7,000 t/yr of cobalt during an operating life of 38 years. In January 2004, the final approval of the Council of Ministers was received, permitting the formal execution of the Contract of Association for KMT. In March 2004, the final approval that authorized the KMT contract of association was signed by the President of Congo (Kinshasa), following which AMF announced that it would begin the definitive project feasibility study along with the required environmental and social impact studies. American Minerals Fields, Inc. was scheduled to change its corporate name to Adastra Minerals Inc. in May 2004 (American Mineral Fields Inc., 2003§; 2004a§, b§).

Gécamines continued to face multiple crises in finance, production, and transportation during 2003 with production at an historical low of 8,000 t of refined copper and 1,200 t of refined cobalt. The company's poor condition was attributed to a combination of aging equipment, lack of domestic and international investment, lack of fuel and spare parts, and problems with transporting ore and finished products. With assistance from the World Bank and drawing on its proven, probable, and possible ore reserves of copper (56 Mt contained metal), cobalt (4 Mt), and germanium (3.4 Mt), and zinc (6.4 Mt), Gécamines began a survival and restructuring program, which involved reducing its workforce by 45% to make manpower consistent with production levels. The proposed minimal survival plan for 2004 would require $27.5 million to return production levels to 25,000 t/yr of copper, 5,000 t/yr of zinc ingots, and 4,500 t/yr of cobalt. The proposed 5-year investment plan would need an investment of $248 million to bring production up to 100,000 t/yr of copper and 10,200 t/yr of cobalt, which would give Gécamines enough cash flow to become self-sustaining again. Funding would come from direct loans and from investment by joint-venture partners. The revitalization plan also called for a 5-year drilling plan, which included provisions for 4,500 meters per year of drilling on current deposits to refine resource estimates and 5,000 meters per year of drilling on greenfields exploration targets on Gécamines land holdings (Gécamines, 2004).

Diamond.—MIBA accounted for about one-quarter of the total national production of diamond from mining operations in Mbuji Mayi in Kasai Province. MIBA reported production at 6.9 million carats of low-value, chiefly industrial grade stones in 2003; this was a 24% increase compared with that of 2002. MIBA announced a new 5-year plan for 2004-08, which called for increasing production by about 500,000 carats per year to reach a total of 10 million carats per year in 2008. The company also expected to increase the percentage of gem-quality diamond produced from 3.5% in 2003 to 6% in 2008, which would increase the value of sales to more than $150 million per year by 2008. Remaining diamond reserves were reported to be 78 million carats, of which 86% was contained in kimberlites, 12% in terrace and river gravels, and 2% in stockpiled tailings. The kimberlite reserve was 36.5 million cubic meters of ore at a grade of 1.82 carats per cubic meter. The average grade of the gravels was 2.7 carats per cubic meter. MIBA was seeking partners to help finance several projects, including $700 million to develop two kimberlite deposits; $30 million to exploit the Kasai, Mubimayi, and Sankuru river gravels; $45 million to rehabilitate the Lubilanji and Tshiala hydroelectric facilities and the transmission lines into Mbujimayi; and $100 million to run a line from the Inga-Shaba high-power transmission line from Tshimbulu to Mbujimayi, which would make 150 megawatts of additional generating capacity available to the region (Shungu Tshofu, 2004).

In November 2002, about 50 countries that produced, processed, and traded diamond became signatories to the Kimberley Process Certification System, which was aimed at establishing a system of certificates of origin to control the global trade in diamond. The treaty resulted from international concern over the growing evidence of illegally mined and exported diamond revenues being used to support civil conflicts in Angola, Sierra Leone, and elsewhere (Kimberley Process Secretariat, 2003§).

Artisanal mining around the Tshikapa, Mbujimayi, and Kinsingani areas continued to account for the majority of national diamond production. With the signing of the Sun City Peace Accord and the international Kimberley Process agreement there was a significant increase in reported production of artisanal diamonds in 2003 to 21.1 million carats compared with 16.4 million carats in 2002, and, one can assume, a sharp decrease in the smuggling and sale of Congo (Kinshasa) diamond through other countries.

Sengamines, which was owned by Oryx Natural Resources (ONR), operated diamond concessions at Mbuji-Mayi in the Kasai Oriental in partnership (49%) with MIBA (16%) and the central Government (33.8%). The Sengamines concessions reportedly had been expropriated from MIBA and transferred to ONR. ONR was granted an exclusive management contract with Sengamines and its shareholders. Following an investment of more than $100 million in infrastructure, mine equipment, and processing plants during 2001 and 2002, Sengamines exported more than 1.1 million carats in 2003, which were valued at $14.86 per carat. When at full production by the end of 2004, Semgamines was expected to produce at a rate of 350,000 to 400,000 carats per month. Details of Sengamines operations were available through the company's Web site (Sengamines S.A.R.L., 2004§).

In 2004, the coalition of African and Canadian non-governmental organizations, Partnership Africa Canada, published an annual review of diamond mining in Congo (Kinshasa) for 2003, which provided an in-depth look at the location, size, value, and trading of diamond in the country. It estimated that the informal artisanal sector included about 700,000 diggers and 100,000 traders (Partnership Africa Canada, 2004§).

Outlook

With support from the World Bank and the International Monetary Fund, Government efforts during 2002 and 2003 to rebuild state institutions and to put in place a pragmatic new mining code were a positive sign for the future. Despite signed peace treaties, however, Congo (Kinshasa) was still struggling to resolve the ongoing civil war, to reestablish a central Government recognized nationally, and to resolve refugee problems and ethnic conflicts, especially in the eastern provinces bordering Rwanda and Uganda. The decline of copper and cobalt production during the 1990s led to the deterioration of Gécamines, which was the country's most important company. Despite almost insurmountable operating difficulties, Gécamines continued to operate, albeit at limited capacity. The new mining law, which promotes privatization of the state-run mining sector and stronger guarantees of property title and investment security by the Government, will help to attract new foreign capital and technical expertise needed to redevelop the country. Lack of transparency in business transactions with the Government and weak legal structures remain problems. Because of its size and wealth of resources, the long-term potential of Congo (Kinshasa) is more promising, and the country could return to world markets as an important supplier of cobalt, copper, diamond, and zinc. The future prospects for economic development of Congo (Kinshasa) depend on its ability to achieve political and economic stability and to implement the legal and business frameworks needed to attract new foreign investment.

For more-extensive coverage of the mineral industry of Congo (Kinshasa), see the 2001 and 2002 Minerals Yearbook, Volume III, Mineral Industries of Africa and the Middle East.

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Major Sources of Information

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TABLE 1
CONGO (KINSHASA): PRODUCTION OF MINERAL COMMODITIES[1]

(Metric tons unless otherwise specified)

Commodity		1999	2000	2001	2002	2003
METALS						
Cobalt:						
Mine output, Co content[e, 2]		6,000	11,000 r	15,000 r	14,500 e	12,000
Metal, Co content[3]		5,180	4,320	4,071	3,000 e	1,200
Columbium (niobium) and tantalum:						
Columbite-tantalite concentrate:						
Gross weight		NA 4	450	200 e	100 e	50
Nb content[e]		NA	130	60	30	25
Ta content		NA	130	60	30	25
Copper:						
Mine output, leaching (electrowon)		32,000 e	21,000 e	20,988	32,300	52,700
Metal, primary:						
Smelter, electrowon (low grade)		32,000 e	21,000 e	20,988	30,000	8,000
Refined, electrolytic		31,225	30,800	37,800 r	30,000 e	8,000
Germanium	kilograms	--	--	--	3,500	2,500
Gold[5]	do.	207	69	19 r	20 e	20
Silver[e]	do.	4,000 r	--	--	2,100	35,500
Steel[5]		87,000	159,000	80,000	80,000 e	40,000
Tin[e]		150	50	50	50	52
Zinc, mine output, Zn content		--	-- r	1,014	--	--
INDUSTRIAL MINERALS						
Cement, hydraulic[5]		159,100	169,000	201,000 r	190,000 e	190,000
Diamond:[5, 6]						
Artisanal	thousand carats	15,328	11,300 r	10,700 r	16,400 r	21,100
Société Minière de Bakwanga[7]	do.	4,732	4,600 r	6,200	5,556	6,900
Total	do.	20,060	15,900 r	16,900 r	21,956	27,000
Lime[e]		25,000	25,000	25,000	25,000	25,000
Stone, crushed[5]		249,000	260,000	191,000 r	190,000	190,000 e
Sulfuric acid[e]		95,000	80,000	80,000	80,000	80,000
MINERAL FUELS AND RELATED MATERIALS						
Coal, bituminous[e]		--	--	1,000	1,000	1,000
Petroleum:						
Crude	thousand 42-gallon barrels	8,650	8,500 r	8,500 r	8,500 e	85,000
Refinery products:[5]						
Liquefied petroleum gas	do.	4	-- r	-- r	--	--
Gasoline	do.	431	-- r	-- r	--	--
Kerosene	do.	340	-- r	-- r	--	--
Jet fuel	do.	180	-- r	-- r	--	--
Distillate fuel oil	do.	460	-- r	-- r	--	--
Residual fuel oil	do.	880	-- r	-- r	--	--
Refinery fuel and losses[8]	do.	205	-- r	-- r	--	--
Total	do.	2,500	-- r	-- r	--	--

[e]Estimated; estimated data are rounded to no more than three significant digits; may not add to total shown. NA Not available. [r]Revised. -- Zero.
[1]Table includes data available through July 2004.
[2]Includes mine production and reprocessed tailings.
[3]Salable refined production only; excludes white alloy and matte.
[4]Columbite-tantalite concentrates are produced by artisanal miners, but data on production are speculative and unreliable for estimating.
[5]Reported data for 1998-2001 from International Monetary Fund Country Report No. 03/175, June 2003.
[6]An estimated 20% of total diamond is gem quality; the majority of production is from artisanal mining.
[7]Société Minière de Bakwanga, 80% owned by Government.
[8]Includes "Other."

TABLE 2
CONGO (KINSHASA): STRUCTURE OF THE MINERAL INDUSTRY IN 2003[1]

(Metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Cement	Cimenterie Nationale SARL	Kimpese Plant, 40 kilometers south of Kinshasa	318,000.
Do.	Lukala Cements Company (The Forrest Group)	Lukala Plant near Kinshasa in Bas-Congo Province	360,000.
Do.	Interlacs (The Forrest Group)	Kabimba Plant near Lubumbashi, Katanga Province	50,000.
Do.	Cemenkat (The Forrest Group and Gécamines)	Lubudi Plant, between Likasi and Kolwezi, Katanga Province	200,000.
Coal	La Générale des Carrières et des Mines (Gécamines)	Luena Coal Mine	800,000 bituminous coal.
Columbium-tantalum, and tin	Société Minière du Congo (Somico SARL) [formerly Société Minière Industrielle du Kivu (Sominki)] (Government, 60%)	Various deposits in Kivu Provinces (closed)	NA.
Copper-cobalt	Gécamines East Group:		
	Ruashi Mining [Metorex Ltd.of South Africa; Sentinelle Global Investments (Proprietary) Limited; Gécamines]	Ruashi-Etoile Mine project near Lubumbashi:	
		Phase 1 (startup date pending in 2004)	10,000 Cu; 1,300 Co in in concentrates;
		Phase 2 (future: 4 years after startup)	42,500 Cu; 3,500 Co in concentrates.
Do.	Gécamines	Copper smelter at Lubumbashi (closed)	150,000 blister copper.
Do.	Le Societe pour le Traitement de la Terril de Lubumbashi (STL) [OM Group Inc. (OMGI), 55%; Gécamines, 25%; Enterprise Generale Malta Forrest SPRL (EGMF), 20%]	Big Hill tailings and cobalt smelter at Lubumbashi	5,000 Co in a Cu-Co alloy; 3,500 Cu in a Cu-Co alloy; 15,000 zinc oxide pellets.
Do.	OM Group Inc. (OMGI), 55%; Enterprise Generale Malta Forrest SPRL (EGMF), 25%; Gécamines, 25%, joint venture	Luiswishi Mine near Lubumbashi	12,000 copper in concentrates; 6,000 cobalt in concentrates.
Do.	Gécamines Central Group:		
	Société Minière de Kabolela et de Kipese (SMKK) [Melkior Resources Inc.of Canada, 60%, and Gécamines, 40%]	Kabolela Mine near Likasi	NA.
Do.	Kababankola Mining Company (KMC) (Gécamines, 20%, and Tremalt Ltd., 80%)	Kakanda and Kambove Mines near Likasi	NA.
Do.	Gécamines	Kamwale Mine	60,000 Cu; 1,200 Co.
Do.	do.	Luisha Mine	620,000 Cu; 20,000 Co.
Do.	do.	Kamoya C Mine	79,000 Cu; 7,100 Co.
Do.	do.	Kamoya S Mine	36,000 Cu; 11,000 Co.
Do.	do.	Kamatanda Mine	57,000 Cu; 4,000 Co.
Do.	do.	Kamfundwa Mine	400,000 Cu; 48,000 Co.
Do.	do.	Kambove concentrator	1,500,000 copper concentrates.
Do.	do.	FEP cobalt plant	1,200 cobalt cathodes.
Do.	do.	Shituru electrowinning copper-cobalt refinery at Likasi	150,000 copper cathodes.
Do.	do.	Panda reverberatory furnaces at Shituru	150,000 wirebar or anodes.
Do.	do.	Sulfuric acid plant at Shituru	NA.

See footnote at end of table.

TABLE 2--Continued

CONGO (KINSHASA): STRUCTURE OF THE MINERAL INDUSTRY IN 2003[1]

(Metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Copper-cobalt--Continued		Gécamines Central Group--Continued:		
		Tenke Mining Corp., 60%; Gécamines, 40%, joint venture; Phelps Dodge Corp. has 2003 option to acquire 70% of project	Planned Phase 1 mine at Temke-Fungurume near Likasi (Project agreements and go-ahead pending as of mid-2004)	100,000 copper; 8,000 cobalt.
Do.		Gécamines West Group:		
		Gécamines and Kumba Resources Ltd. joint venture	Kamoto underground mine and mill (project pending in 2004)	NA.
Do.		Gécamines, Kinross Gold Corp., and Enterprise Generale Malta Forrest SPRL (EGMF)	do.	75,000 Cu by 2005; 200,000 Cu by 2010.
Do.		Gécamines	KOV open pit mine at Kolwezi	6,700,000 Cu; 500,000 Co.
Do.		do.	Tilwezembe Mine	19,000 Cu; 15,000 Co.
Do.		do.	DIMA-Kamoto concentrator at Kolwezi	8,000,000 ore.
Do.		do.	Luilu hydrometallurgical refinery and leach plant near Kolwezi	175,000 Cu and 8,000 Co in cathodes.
Do.		do.	Kolwezi zinc leach plant and refinery	30,000 zinc.
Do.		KingamyamboMusonoi Tailings SARL [Congo Mineral Developments Ltd. (CMD), 82.5%; Gécamines, 12.5%; Government, 5%] CMD is 100% owned by Adastra Minerals Inc. (formerly American Mineral Fields Inc.)	Kingamyambo and Musonoi tailings dams retreatment project and solvent extraction-electrowinning plant (SX-EW) at Kolwezi, Katanga Province (planned startup in 2007)	42,000 copper cathodes; 7,000 cobalt cathodes.
Do.		Compagnie Minera De Sakania SPRL (Comisa), [First Quantum Minerals Ltd., 100%)]	Lonshi Mine, pedicle area, Katanga Province	35,000 copper.
			(Processed at Bwana Mkwuba solvent extraction-electrowinning plant (SX-EW) plant in Zambia)	NA.
Do.		do.	Lufua Project pedicle area, Katanga province	NA.
Do.		Anvil Mining Congo SARL (Anvil Mining NL, 81.1%, and First Quantum Minerals Ltd., 18.9%)	Dikulushi Mine and Heavy Media Separation and Spiral Plant near Lake Moero, Katanga Province (2004 expansion)	20,000 Cu in concentrates; 56,000 kilograms silver in concentrates.
Diamond	carats	Société Minière de Bakwanga (MIBA) [Government, 80%; Sibeka Group, 20%, which was owned by N.V. Umicore SA, 79%, and De Beers Centenary AG, 20%]	Diamond mines at Mbujiimaya, Kasai Oriental Province and at Tshikapa, Kasai Occidental Province	7 million carats; plan 10 million by 2008.
Do.	do.	Extensive artisanal operations	Various small-scale placer and alluvial operations in Kasaï Occidental Provinces, in Bandundu Province, at Bafwansende and Kisangani in Haut-Congo Province, at Lubutu in Maniema Province at Kota-Koli, Yakoma, and Gbadolite in Equateur Province), in Nord Kivu Province, and at Luozi in Bas-Congo Province	15 to 25 million carats.
Germanium	kilograms	OM Group Inc. (OMGI)	Produced at OM Group Inc. chemical plant in Kokkola, Finland from materials exported from STL cobalt smelter in Lubumbashi	6,000.

See footnote at end of table.

TABLE 2--Continued

CONGO (KINSHASA): STRUCTURE OF THE MINERAL INDUSTRY IN 2003[1]

(Metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Gold	do.	Société Aurifère du Kivu et du Maniema S.A.R.L. (Sakima) (Banro Resource Corp. of Canada, 93%, and Government, 7%)	Kamituga-Mobale underground gold mine and the Lugushwa, Namoya, and Twanziga gold properties southwest of Bukavu in Kivu Province (Closed in 1998; new feasibility study in 2004)	NA.
Do.	do.	Office des Mines d'Or de Kilo-Moto (Okimo)	Kilo-Moto Gold Mine near Bunia, Haut-Congo Province	NA.
Petroleum	42-gallon barrels	ChevronTexaco Oil Congo (DRC) Ltd., [Muanda International Oil Co. (Perenco plc) (Europe) 50%; Teikoku Oil Co. Ltd. (Japan), 32.3%; ODS Ltd. (United States), 17.7%]; ChevronTexaco interests sold to Perenco in July 2004	7 offshore wells	19,000 barrels per day.
Do.	do.	TotalFinaElf	Onshore wells	16,000 barrels per day.
Do.	do.	Societe de Recherche et d'Exploitation des petroles au Congo Perenco plc (France and United Kingdom)	East Mibale and 5 other offshore wells	7,000 barrels per day.
Do.	do.	Heritage Oil Co. of Canada	Exploration in Albert Graben on Congo/Uganda border	NA.
Do.	do.	Societe Congo-Italienne de Raffinage (SOCIR) (Government, 50%, and Agip SA, 50%)	Petroleum refinery at Muanda	17,000 barrels per day petroleum products.
Sulfur	do.	Gécamines	Sulfuric acid plant at Kolwezi	NA.
Zinc	do.	Zincongo [Adastra Minerals Inc., Zinc Corp. of South Africa Ltd. (subsidiary of Kumba Resources Ltd., 50% option), and Gécamines]	Kipushi Mine and concentrator, 30 km southwest of Lubumbashi, Katanga Province	1.6 million metric tons ore per year.
Do.	do.	do.	Proposed new Kipushi zinc smelter	200,000.
Do.	do.	Gécamines	Kolwezi zinc smelter	72,000.

NA Not available.

[1]Includes data available through August 2004.